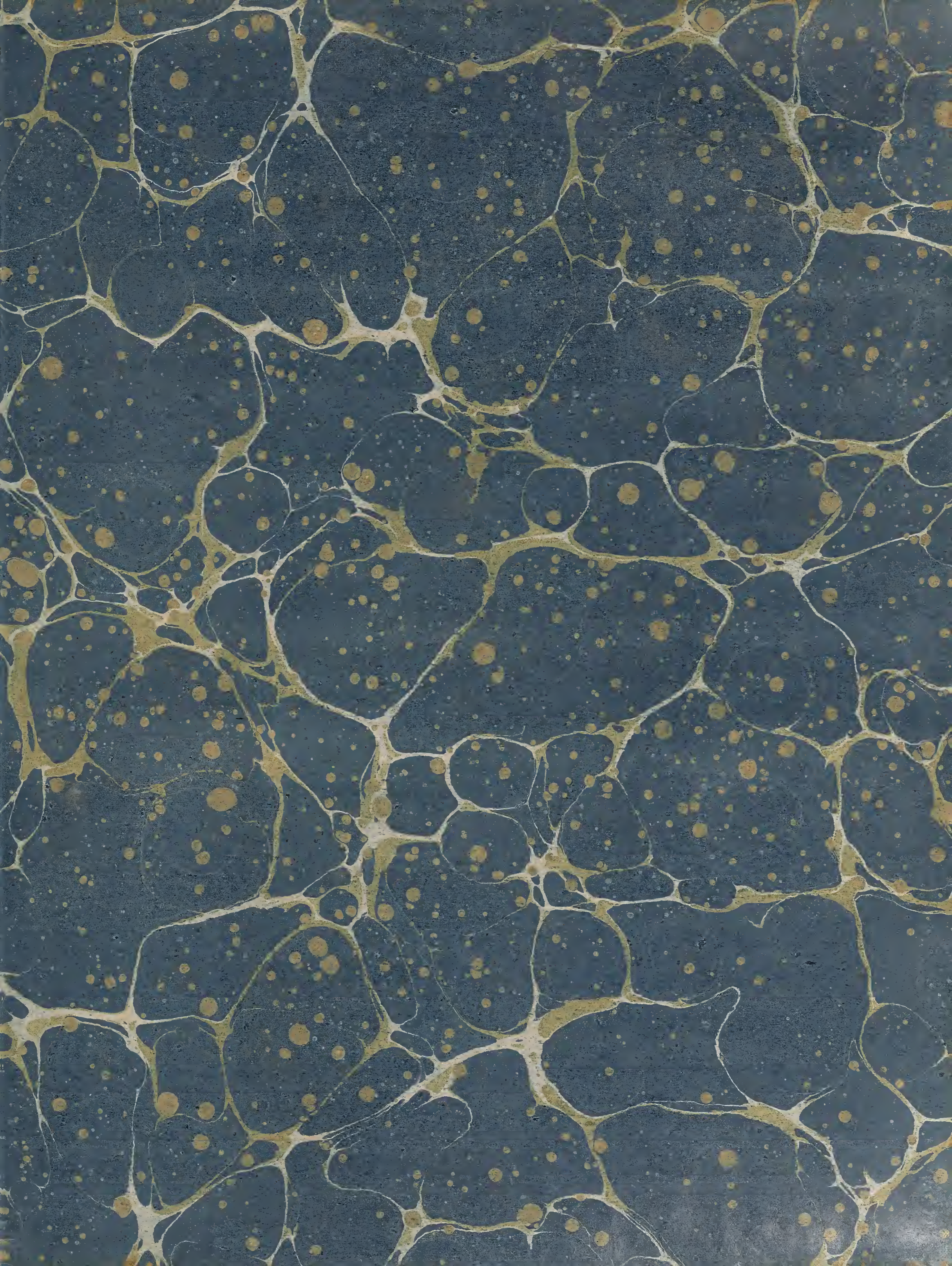




J. C. Mansel-Pleydell.



SCIENTIFIC RESULTS
OF
THE SECOND YARKAND MISSION;

BASED UPON THE COLLECTIONS AND NOTES
OF THE LATE
FERDINAND STOLICZKA, PH.D.

RHYNCHOTA,

BY
W. L. DISTANT.

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SCIENTIFIC RESULTS

OF

THE SECOND YARKAND MISSION.

RHYNCHOTA :

BY W. L. DISTANT.

THE Hemiptera collected by Dr. Stoliczka, though not numerous, are interesting in the details of their geographical distribution, and conform, I believe, in that respect, to the other portions of the fauna of the districts traversed by the expedition. Two faunas are represented in the collection, one the Indian or Oriental, rather strongly by the insects collected at Murree, the remaining Hemiptera from the other localities being almost wholly Palæarctic.

The following is the analysis of the portion of the collection obtained at Murree :—

<i>Dalpada confusa</i> , n. sp.	. . .	A genus belonging principally to the Indian region, extending to Java and the Philippines, but represented also in Madagascar.
———— <i>tecta</i> , Walk.	. . .	Eastern Bengal Province (Blanford).
<i>Palomena viridissima</i> , Poda	. . .	Palæarctic.
———— <i>reuteri</i> , n. sp.	. . .	The genus extends to the Japanese sub-region of the Palæarctic region.
<i>Bagrada picta</i> , Fab.	. . .	Indian Province (Blanford). Palæarctic, Persian sub-region.
<i>Menida distincta</i> , n. sp. ¹	. . .	Genus represented chiefly in Indian and Ethiopian regions, and by one species in the Japanese sub-region of the Palæarctic.
<i>Prionaca exempta</i> , Walk.	. . .	Eastern Bengal Province (Blanford).
<i>Acanthosoma proxima</i> , Dall.	. . .	————— ? type collected by General Hardwicke (no locality).
<i>A. forfex</i> , Dall.	. . .	————— ? Northern India ? (Brit. Mus.).
<i>A. aspera</i> , Walk.	. . .	————— ? —————
<i>Urostylis fumigata</i> , Walk. var.	. . .	—————
<i>Cletus punctiger</i> , Dall. var.	. . .	Indian region.
<i>Lygæus (Spilostethus) militaris</i> , Fab.	. . .	Palæarctic and Indian regions.
<i>Arocatus pilosulus</i> , n. sp.	. . .	Genus represented in Palæarctic, Indian, and Australian regions.
<i>Phytocoris stoliczkanus</i> , n. sp. ²	. . .	Genus Palæarctic.
<i>Calocoris stoliczkanus</i> , n. sp.	. . .	—————
———— <i>forsythi</i> , n. sp.	. . .	—————
<i>Euacanthus extrema</i> , Walk.	. . .	Eastern Bengal Province (Blanford), ? N. India (Brit. Mus.).

¹ This species was also collected in the Sind Valley.

² This species was also collected in the Jhelam and Sind Valleys.

The strong Indian affinities of these 18 species collected at Murree may be seen as under:—

Common to Indian Region	9
„ Indian and Palæarctic Regions	2
„ Indian, Ethiopian, and Palæarctic	1
„ Indian, Australian, and Palæarctic	1
„ Palæarctic	5
<hr/>	
	18 species.

In discussing the Indian relationship of the Hemipterous fauna, I have followed the sub-regions or provinces of Mr. Blanford (Ann. and Mag. Nat. Hist., 4th Ser., Vol. 18, pp. 280—2, 1876). As regards the sub-regions of the Palæarctic area, I shall prefer to follow Mr. Sclater (Address Biol. Sec. Brit. Assn., Bristol, 1875).

The following are the 13 species which are also found in the Cis-Atlantean or Mediterranean sub-region:—

<i>Zicrona cærulea</i> , Lin.	Kugîár, Eastern Turkestan.
<i>Carpocoris nigricornis</i> , Fab.	_____
<i>Dolycoris baccarum</i> , Lin.	Sind Valley, Kashmir.
<i>Eurydema festiva</i> , Lin.	Yangihissar, E. Turkestan.
<i>Comptopus lateralis</i> , Germ.	Sind Valley, Kashmir.
<i>Therapha hyoscyami</i> , Lin.	Kugîár.
<i>Lyg. (Spilostethus) militaris</i> , Fab.	Murree, Punjab hills.
_____ <i>saxatilis</i> , Scop.	Sind Valley, Kashmir.
— (<i>Graptolomus</i>) <i>equestris</i> , Lin.	Kugîár and neighbourhood of Sánju, E. Turkestan.
<i>Gonianotus marginepunctatus</i> , Wolff.	Pámir road, Sarikol to Panja.
<i>Coriscus fesus</i> , Lin.	Yárkand.
<i>Notonecta glauca</i> , Lin.	_____
<i>Corisa geoffroyi</i> , Leach	_____

The following 4 species have been recorded from the sub-region of the Atlantic Islands, principally from Madeira and Teneriffe:—

<i>Dolycoris baccarum</i> , Lin.	Sind Valley, Kashmir.
<i>Comptopus lateralis</i> , Germ.	_____
<i>Lyg. (Spilostethus) militaris</i> , Fab.	Murree, Punjab hills.
<i>Gonianotus marginepunctatus</i> , Wolff.	Pámir road, Sarikol to Panja.

This list is, however, very poor and inadequate, owing to the little knowledge we yet possess as to the Hemiptera of the Atlantic Islands. It would be futile to carry the analysis of this region further, owing to the paucity of record.

HEMIPTERA-HETEROPTERA.

Family—*PENTATOMIDÆ*, Stål.Sub-family—*CYDNINÆ* (*CYDNINA*), Stål.1. *ÆTHUS MAURUS*, Dall.

A. maurus, Dall., List, pt. 1, p. 118, 18 (1851).—Walk., Cat. Het. 1, p. 158 (1857).—Stål, Enumerat. Hemip., pt. 5, p. 26, 1876.

Hab.—Jhelam Valley, July 1873.

Distributed generally throughout Hindustan.

2. *ÆTHUS*, sp.

Allied to *Æ. pygmæus*, Dall., of which it is probably only a slight variety. The collection contains only one specimen.

Hab.—On the road across the Pámir, from Sarikol to Panja, April to May 1874.

Sub-fam.—*ASOPINÆ* (*ASOPIDA*), Stål.3. *ZICRONA CÆRULEA*, Lin.

Cimex ceruleus, Lin., Syst. Nat., ed. 10, i, p. 445, 38 (1758).—Stål, Enumerat. Hemip., pt. 1, p. 36, (1870).

Hab.—Kugíár, South Yárkand, May to June 1874.

This wide-ranging species extends throughout the whole of the Palæarctic and Oriental regions.

Europa tota, India orientalis, Java, Borneo, Malacca (Stål.); Astracan (Jacovlev); N. W. Siberia (Sahlberg); Bagdad (Coll. Brit. Mus.); Morocco, Japan (Coll. Distant).

Sub-fam.—*PENTATOMINÆ* (*PENTATOMINA*), Stål.4. *DALPADA CONFUSA*, Dist. Fig. 1.

Dalpada confusa, Dist., Trans. Ent. Soc. Lond., 1879, p. 121.

Luteous, thickly covered with green punctures. Head emarginate in front with the sides reflexed, and some small indistinct ochreous markings at base. Antennæ pitchy, each joint luteous at base, basal and apical joints smallest, 2nd shorter than 3rd, 3rd and 4th subequal. Rostrum just passing posterior coxæ, with the tip pitchy. Pronotum somewhat transversely gibbous at base in a line with lateral angles, after which it is abruptly deflexed towards head, lateral angles prominent, subacute, lateral margins denticulated for about half their length.

from apex; the punctuation is very dense along the lateral margins and at pronotal angles. Scutellum somewhat gibbous at base, deflexed towards apex, where it is more sparingly punctured. Corium with a faint impunctate longitudinal line on disc, extending from base to about two-thirds its length, rather widened at apex. Membrane extending beyond apex of abdomen, pale fuscous with the nervures dark brown for half the length from base, followed by a row of four brown spots and a marginal row of six spots of the same colour, the two outer ones being long and linear. Under side of body luteous, with the pectoral and abdominal margins broadly punctured with green, sparingly on abdomen, and more densely on prosternum; legs luteous, thickly spotted with brown; tarsi luteous, apical joint pitchy.

♂. Long. 14 mill.; lat. pronot. ang. $6\frac{1}{2}$ mill.

♀. Long. 15 to 16 mill.; lat. pronot. ang. $7\frac{1}{2}$ mill.

Hab.—Murree.

I have compared the above with all the congeneric types of Dallas in the British Museum and of Hope in the collection at Oxford, from which it is quite distinct in general structure. Dr. Stoliczka collected a fine series of both sexes.

5. DALPADA TECTA, Walk.

Dalpada tecta, Walk., Cat. Het. 1, p. 224, 1867.

Hab.—Murree. The type was from Sylhet.

6. PALOMENA VIRIDISSIMA, Poda.

Cimex poda, Mus. Gr. 56, 10. *Pal. viridissima*, Stål, Hem. Fab. 1, p. 28. Muls. et Rey., Pun. Fr. 277, 1, 1866. *Pent. dissimilis*, Dall., List. 1, p. 241, 20, 1851.

Hab.—Murree.

This Palæarctic form is generally distributed throughout Europe. N. W. Siberia (Sahlberg).

7. PALOMENA REUTERI, Dist. Fig. 2.

Palomena reuteri, Dist., Trans. Ent. Soc., Lond., 1879, p. 122.

♂. Green; head, anterior border of pronotum, basal half of scutellum, and membrane bronzy. Head obscurely rugulose, very thickly and strongly punctured with black, median lobe slightly shorter than the lateral ones. Rostrum luteous, with the tip black. Antennæ luteous, apical joint somewhat fuscous, 3rd joint distinctly longer than the 2nd, rather shorter than the 4th, 5th longest. Pronotum obscurely rugulose, very thickly and strongly punctured with black, with two slightly waved lateral linear impunctate foveæ situated a little behind the anterior margin, lateral angles somewhat prominent and rounded. Scutellum thickly covered with deep black punctures, slightly rugulose at base. Corium thickly and deeply punctured with black. Abdomen above black, thickly and finely punctured with the connexivum luteous, punctured with black. Body beneath pale luteous, slightly clouded with greenish. Legs greenish, tarsi luteous.

♀ Second joint of antennæ distinctly longer than the 3rd, 2nd and 4th subequal. Abdomen, beneath, with some irregular obscure black markings.

Long. 11 to 12 mill.; exp. pronot. ang. 6 to 7 mill.

Hab.—Murree.

Allied to *P. viridissima*, Poda, but differs in its smaller size and shorter antennæ; it is also more straightened and narrowed than in that species, and the structure of the pronotum is different.

8. CARPOCORIS NIGRICORNIS, Fab.

Cimex nigricornis, Fab., Ent. Syst., IV, 94, 59.

Hab.—Kugiár, May to June 1874.

This is a common Palæarctic form. N. W. Siberia (Sahlberg); Astracan (Jakovlev); Algeria (Lucas); Morocco (Coll. Distant).

9. DOLYCORIS BACCARUM, Lin.

Cimex baccarum, Lin., Faun. Sv., 249, 928.—*Mormidea baccarum*, Fieb., Eur. Hem., 335, 1.—*Pentatoma baccarum*, Hahn, Wanz. Ins., fig. 152.—*Cimex verbasci*, De Geer, Mem. iii, 257, 4 (1773).

Hab.—Sind Valley, August 1873.

Common to Palæarctic region. Madeira (Wollaston); Tunis (Coll. Brit. Mus.); Morocco (Coll. Distant). Algeria (Lucas); N. W. Siberia (Sahlberg); Astracan (Jakovlev).

10. EURYDEMA WILKINSI, Osch. in litt., Fig. 4.

Eurydema wilkinsi, Dist., Trans. Ent. Soc. Lond., 1879, p. 123.

Pale luteous, somewhat thickly and coarsely punctured. Head with the anterior portion of the submarginal lateral borders and a large triangular marking at base; pronotum with two large discal subquadrate linear markings elongated exteriorly; scutellum with the base and two central forked lines extending therefrom to about middle, and two spots on lateral margins a little before apex; corium with two claval streaks; a linear spot on middle of outer margin; a transverse-waved fascia, extending from base of membrane for two-thirds across corium, and a rounded sub-apical spot, shining green. Abdomen above luteous, apical segment black, connexivum with a row of large green spots. Underside of body pale luteous. Abdomen with a marginal row of spots situated on the outer edge of each segmental suture, and a submarginal row of transverse slightly-waved linear markings, situated on middle of each segment, greenish-black. Sternum with some irregular markings of the same colour. Legs pale luteous, streaked with greenish-black, and femora obscurely annulated with the same colour near apex. Antennæ black, 2nd joint about as long as 1st and 3rd together, 4th somewhat dilated, about equal in length to 5th. Rostrum luteous pitchy at base and apex.

Long. 7 mill.

Hab.—Yangihissar, April 1874.

I have retained the unpublished name under which, Dr. Reuter informs me, this species has been sent from Turkestan. In most specimens the markings on the pronotum are

not perfectly subquadrate, but disjointed. I have, however, thought it best to describe the specimen submitted to Dr. Reuter and returned as above.

11. EURYDEMA FESTIVA, Lin.

Cimex festiva, Lin., Syst. Nat., 723, 57.—*Strachia festiva*, Hahn, Wanz. Ins., fig. 93.—*Eurydema ornata*, Sahlb., Mon. Geoc. Fenn., 24, 1.

Hab.—Yangihissár, April 1874. Kugiár, May to June 1874. Sind Valley, August 1873. A common Palæarctic form. Madeira (Wollaston); N. W. Siberia (Sahlberg); Astracan (Jacovlev); Algeria (Lucas).

11a. E. FESTIVA, var. HERBACEA, H. Sch.

Eurydema herbaceum, H. Sch., Cont. Panz. F. G., 115, 12, and Nom. Ent., 1, 55, and 91 (1835). Hahn, Wanz. 3, F. 239 (1835).

Hab.—Sind Valley, August 1873.

12. BAGRADA PICTA, Fab.

Cimex pictus, Fab., S. Ent., p. 715, 93 (1775), Spec. 2, p. 359, 127 (1781). Wolff, Ic., 1, p. 17, F. 17 (1800).—*Strachia picta*, Dall., List. 1, p. 259, 5 (1851). Stål, Enumerat. Hemip., pt. 5, p. 88.

Hab.—Murree.

This species, with few exceptions, has hitherto been only received from Bengal. Bombay (Coll. Dist.); Bagdad (Coll. Brit. Mus).

13. MENIDA DISTINCTA. Fig. 3.

Menida distincta, Dist., Trans. Ent. Soc. Lond., 1879, p. 122.

Luteous, covered with strong greenish-black punctures. Head luteous, with the lateral margins and four longitudinal furrowed punctured lines greenish-black. These lines are much more distinct on the ante-ocular portion of the head. Eyes dull ochreous. Antennæ pilose with the 2nd joint shorter than the 3rd, 4th and 5th subequal, rather longer than 3rd; first 3 joints luteous, apex of the 1st and apical half of the 3rd, black, 3rd and 4th joints black, narrowly luteous at base. Rostrum luteous, apical joints pitchy. Pronotum with an anterior submarginal line of greenish-black punctures and two irregular transverse ocellated punctured marks of the same colour on anterior portion of the disc. Scutellum with a large central subbasal greenish-black spot, and two small and somewhat indistinct ones of the same colour situated on the lateral margins a little before apex. Membrane transparent, whitish. Abdomen above black, connexivum luteous, spotted with black. Underside of body and legs luteous, sparingly and distinctly punctured with black. Tarsi pitchy.

Long. 6 mill.

Hab.—Murree and Sind Valley, Kashmir.

Menida histrio, Fab., is the nearest allied species.

14. PRIONACA EXEMPTA, Walk.

Prionaca exempta, Walk., Cat. Het., 3, p. 569.

Hab.—Murree.

N. Hindostan (Coll. Brit. Mus.); Assam (Coll. Distant).

Sub-Family—*ACANTHOSOMINÆ* (*ACANTHOSOMINÆ*), Stål.

15. ACANTHOSOMA PROXIMA, Dall.

Acanthosoma proximum, Dall., List., 1, p. 303, 2 (1851).

Hab.—Murree.

The type in the British Museum without a locality was presented by General Hardwicke, and is probably from N. India.

16. ACANTHOSOMA FORFEX, Dall.

Acanthosoma forfex, Dall., List., 1, p. 308, 16 (1851).

Hab.—Murree.

N. India (Coll. Brit. Mus.).

17. ACANTHOSOMA RECURVA, Dall.

Acanthosoma recurvum, Dall., List., 1, p. 310, 19 (1851).—*Clinocoris recurvus*, Stål, Enumerat. Hemip., p. 5, p. 114 (1876).

Hab.—Sind Valley, August 1873.

N. India (Coll. Brit. Mus.).

18. ACANTHOSOMA ASPERA, Walk.

Acanthosoma aspera, Walk., Cat. Het., p. 2, p. 395, 17 (1867).

Hab.—Murree.

N. India (Coll. Brit. Mus.).

Sub-Family—*UROSTYLINÆ* (*UROSTYLINÆ*), Stål.

19. UROSTYLIS FUMIGATA, Walk. var.

Urostylis fumigata, Walk., Cat. Het., 3, p. 413 (1867).

Hab.—Murree. The type was from Sylhet.

SECOND YARKAND MISSION.

Family—*COREIDÆ*, Stål.Sub-Family—*COREINÆ* (*COREINA*), Stål.Division *Gonoceraria*, Stål.20. *CLETUS PUNCTIGER*, Dall. var.*Gonocerus punctiger*, Dall., List. 2, p. 494, 3 (1852).*Hab.*—Murree.

The type was from China. Malacca (Walker).

Sub-Family—*ALYDINÆ* (*ALYDINA*), Stål.21. *CAMPTOPUS LATERALIS*, Germ.*Coreus lateralis*, Germ., Reise. Dalm., 491 and F. Ins. Eur., 8, 21. H. Sch., Wanz., v, fig. 549, 1839.*Hab.*—Sind Valley, August 1873.

This species has a wide Palæarctic range and is a somewhat common European form. Teneriffe (Coll. Brit. Mus.); Madeira (Wollaston); Morocco (Coll. Distant); Astracan (Jacovlev).

Sub-Family—*CORIZINÆ* (*CORIZINA*), Stål.22. *THERAPHA HYOSCYAMI*, Lin.Fieb., Eur. Hem., 232 (1861). *Corizus hyoscyami*, Hahn, Wanz., 1, fig. 10.—*Cimex hyoscyami*, Lin., Faun. Sv. 252, 945.*Hab.*—Kugíár, south of Yárkand, May to June 1874.

A well-known European species. N. W. Siberia (Sahlberg); Astracan (Jacovlev); Morocco (Coll. Distant).

Family—*LYGÆIDÆ*, Stål.Sub-Family—*LYGÆINÆ* (*LYGÆINA*), Stål.23. *LYGÆUS (SPILOSTETHUS) MILITARIS*, Fab.*Lygæus militaris*, Stål, Hem. Afr., 2, 133, 13 (1865).—*Cimex militaris*, Fab., S. Ent., p. 717, 103 (1775).*Hab.*—Murree.

Europa meridionalis, Africa borealis et media, India orientalis, Insulæ Philippinæ (Stål.); Madeira (Wollaston); Teneriffe, Canaries, Mauritius, Bagdad, N. India (Coll. Brit. Mus.); Morocco (Coll. Distant); Algeria (Lucas).

24. *LYGÆUS* (*SPILOSTETHUS*) *SAXATILIS*, Scop.

Cimex saxatilis, Scop., Ent. Carn., 128, 371 (1763).—*Lygæus saxatilis*, Dall., List., 2, p. 544 (1852).—*L. (Spilostethus) saxatilis*, Stål, Hem. Fab., 1, 75, 1868.

Hab.—Sind Valley, August 1873.

Generally distributed throughout Europe. Algeria (Lucas).

25. *LYGÆUS* (*GRAPTOLOMUS*) *EQUESTRIS*, Lin.

Cimex equestris, Lin., F. Sv., 253, 946 (1761).—*Lygæus equestris*, Fieb., Eur. Hem., 166, 5.

Hab.—Kugiar, south of Yarkand, May to June 1874. Neighbourhood of Sanju, south-east of Yarkand.

Europa tota, Africa borealis, Sibiria orientalis (*Mus. Holm.*, Sahlberg); Bagdad, Japan (Coll. Brit. Mus); Algeria (Lucas).

26. *AROCATUS* *PILOSULUS*. Fig. 5.

Arocatus pilosulus, Dist., Trans. Ent. Soc., Lond., p. 123, 1879.

Testaceous, pilose. Head with the central portion black. Antennæ black, pilose, 2nd joint rather the longest, 3rd and 4th subequal. Rostrum pitchy. Pronotum obscurely punctured, distinctly rugulose on posterior portion; anterior portion crossed by a transverse black submarginal band, and an obscure pitchy band on posterior border. Scutellum pitchy, with the tip red, and with two large round foveæ at base. Corium suffused with dull-pitchy shadings. Membrane pitchy opaque, outer border pale transparent. Under side of body testaceous, strongly suffused with pitchy shadings. Sternum with a submarginal row of three black spots, placed one on prosternum, one on mesosternum, and one on metasternum. Legs pitchy, pilose. The corium is more densely pilose than other parts of the upper surface.

Long. 6 mill.

Hab.—Murree.

Sub-Family—*MYODOCHINÆ* (*MYODOCHINA*), Stål.

27. *LAMPRODEMA* *BREVICOLLIS*, Fieb.

Lamprodema brevicollis, Fieb., Eur. Hem., 185 (1861).

Hab.—Tanktse to Chagra, Pankong Valley, Ladák, September 1873.

The type was from Dalmatia, and Mr. Edward Saunders kindly compared these specimens for me with insects in his own collection received from the Continent.

28. *GONIANOTUS* *MARGINEPUNCTATUS*.

Lygæus marginepunctatus, Wolff, Ic. Cim., 150, t. 15, fig. 144 (1804).

Hab.—On the road across the Pámir, from Sarikol to Panja, April to May 1874.

A not uncommon European species. Madeira (Wollaston); Algeria (Lucas).

Family—CAPSIDÆ.

29. PHYTCORIS STOLICZKANUS. Fig. 6.

Phytocoris stoliczkanus, Dist., Trans. Ent. Soc., Lond., p. 124, 1879.

Uniform pale ochraceous. Head with a V-shaped mark, consisting of small transverse striæ, commencing from near base of antennæ. First joint of antennæ almost as long as head and pronotum together. Pronotum with two slightly raised transverse callosities extending across and occupying the anterior border. Scutellum with the base somewhat raised and gibbous, a waved transverse cordate line near base, and a faint pale longitudinal median line near apex. Hemelytra sparingly clothed with a few minute blackish hairs. Membrane with bright prismatic reflexions.

Long. 6 mill.

Hab.—Murree, Jhelum Valley, and Sind Valley.

30. CALOCORIS STOLICZKANUS. Fig. 7.

Calocoris stoliczkanus, Dist., Trans. Ent. Soc., Lond., 6, p. 124, 1879.

Ochreous clouded with brown, and sparingly clothed with pale yellowish pile. Antennæ brownish, 2nd, 3rd, and 4th joints with the apices pitchy. First joint robust, 2nd somewhat suddenly thickened towards apex, 3rd and 4th very slender, 4th not much more than half the length of the 3rd. Cuneus somewhat paler in colour than corium, brownish and pilose at base, and with a small pitchy spot at apex. Membrane pale fuscous clouded with brown. Underside pale obscure ochreous, clothed with fine pale yellow pile, and a somewhat obscure stigmatal row of small brown spots. Legs mutilated. The pronotum is faintly angulose, and the scutellum somewhat more plainly strigose.

Long. 8 mill.

Hab.—Murree.

I have placed this species in the genus *Calocoris*, though Dr. Reuter writes to me, "*Calocoris*, vel n. gen."

31. CALOCORIS CHENOPODII, Fall.

Phytocoris chenopodii, Fall., H., p. 77, 1.—*Calocoris chenopodii*, Fieb., Eur. Hem., 255 (1861).*Hab.*—Sind Valley, August 1873.

Europa tota, Dauria (Sahlberg).

32. CALOCORIS FORSYTHI. Fig. 8.

Calocoris forsythi, Dist., Trans. Ent. Soc. Lond., p. 125, 1879.

Brownish testaceous. Antennæ with the 1st joint not quite so long as head and pronotum, 2nd slightly and gradually thickened towards apex, 3rd pale luteous at base, 4th wanting.

Head with a deep central longitudinal incision between the eyes. Pronotum rugulose, faintly anteriorly and more distinctly towards posterior border. Hemielytra slightly pilose, somewhat paler towards costal margin, and with extreme outer margin somewhat obscure pitchy. Membrane pale fuscous, somewhat clouded. Scutellum obscurely and transversely strigose. Underside of body castaneous. Fore-legs ochraceous, tibiæ with a longitudinal row of small brownish spots. The rest of the legs wanting.

Long. 7 mill.

Hab.—Murree.

Family—*NABIDÆ*, Fieb.

33. *CORISCUS FERUS*, Linn.

Cimex ferus, Lin., Faun. Suec., 256, 962 (1761).—*Nabis ferus*, Fieb., Eur. Hem., p. 161, 9 (1861).
Reut., O. V. A. F. 29, 6, p. 72, 5 (1872).

Hab.—Yarkand and neighbourhood.

Palæarctic species. America borealis, New Jersey, Wisconsin, California (*Mus. Holm.*, Stål); Europa tota, North-Western Siberia (Sahlberg); Algeria (Lucas).

Family—*REDUVIIDÆ*, Stål.

Sub-Family—*REDUVIINÆ* (*REDUVIINA*), Stål.

34. *REDUVIUS* (*HARPISCUS*) *REUTERI*, DIST. Fig. 9.

Reduvius (*Harpiscus*) *reuteri*, Dist., Trans. Ent. Soc. Lond., p. 125, 1879.

Black, shining, trochanters and bases of femora sanguineous.

Allied to *R. morio*, Kol. Dr. Reuter, who has kindly compared the two species for me, writes:—"R. (*Harpisco*) *morioni*, colore similis, sed major et in omnibus latior, magis nitidus, pedibus pilis exsertis longis destitutis, capite pronoti lobo postico tantum paullo longiore, trochanteribus basique ipsa femorum rufis divergens. Obs.—Gula nigra, ut in *R. morione*."

Long. 20 mill.

Hab.—Sind Valley.

35. *REDUVIUS* (*RHINOCORIS*) *IRACUNDUS*, Scop.

Cimex iracundus, Scop., Ent. Carn., p. 130, 378 (1763).—*Harpactor iracundus*, Fieb., Eur. Hem. 153 (1861).

Hab.—Sind Valley, August 1873. European form.

Sub-family—*PIRATINÆ* (*PIRATINA*) Stål.

36. *PIRATES* (*LESTOMERUS*) *AFFINIS*, Serv.

Peirates affinis, Serv., Ann. Sc. nat., 23, p. 216, 2 (1831). *Lestomerus affinis*, A. and S., Hist., p. 323, 2 (1843).

Hab.—Jhelam Valley, July 1873.

India orientalis (Mus. Holm); Borneo (Mus. Leiden); Cochin-China (*Coll. Signoret*, Stål); Assam (*Coll. Distant*).

Family—*HYDROBATIDÆ*, Stål.

37. *GERRIS* (*LIMNOTRECHUS*) *SAHLBERGI*. Fig. 10.

Gerris (*Limnotrechus*) *sahlbergi*, Dist., Trans. Ent. Soc. Lond., p. 125, 1879.

Head thickly covered with olivaceous pubescence, with a small black spot on vertex. Antennæ ochraceous, 1st joint longest, 2nd and 3rd shortest and subequal, 4th rather longer than 3rd, thickly covered with greyish pile. Pronotum ochraceous, pubescent, anterior 3rd, lateral borders, and a central longitudinal line, olivaceous; the last is testaceous on anterior portion of pronotum. Hemelytra brownish testaceous, with the nervures olivaceous. Under side of body covered with greyish pile, except lateral borders, apex, and central portion of abdomen, which parts are ochraceous. Legs ochraceous, fore femora with an outer longitudinal black fascia.

Long. 10 mill.

Hab.—Neighbourhood of Leh.

Dr. Reuter, who has done me the favour of examining the species, reports—"L. thoracico *affinis et segmentorum genitalium maris structura similis, differt autem pronoto brevior, postice brevius et obtusius producto, angulis dentiformibus segm. abdominalis sexti brevissimis, vix productis, tibiis, præsertim posticis, brevibus, tarsis posticis his tantum $\frac{1}{3}$ brevioribus.*"

38. *GEN. (?) ORIENTALIS*. Figs. 11 and 12.

Halobates (?) orientalis, Dist., Trans. Ent. Soc. Lond., p. 126, 1879.

Brownish ochraceous, finely pilose. Antennæ with the 1st joint curved, robust, and about the length of head and pronotum together; remaining joints more slender, 2nd and 3rd subequal, 4th a little shorter than 3rd. Pronotum with a median pale longitudinal line and a large rounded fovea on posterior portion of disc. The rostrum is 5-jointed; the first two joints are very robust and somewhat fused together, the 2nd minute and much shorter than the 1st, the 3rd much the longest and rather less robust than 1st and 2nd, 4th small, slender, and black, 5th ochreous, very slender and hair-like, and rather shorter than 4th. Sternum clothed with greyish pile.

The eyes are large, semi-globular, and castaneous, situated at base of lateral margins of head. The pronotum is about the length of the head, but broader, truncate in front and rounded behind; mesonotum and metanotum hardly distinguishable, much longer than pro-

notum, and gradually and regularly widened posteriorly. Legs ochreous, fore femora much thickened.

Long. 7 to 8 mill.

Hab.—Jhelam Valley.

I have refrained for the present from making a new genus for the reception of this species. It is in many respects allied to *Halobates* and cannot be included in the genus *Gerris*. The figures will show its anatomical peculiarities.

Family—*NEPIDÆ*, Burm.

39. *RANATRA*, sp. ?

Too mutilated for determination.

Hab.—Yárkand.

Family—*NOTONECTIDÆ*, Stål.

40. *NOTONECTA GLAUCA*, Lin.

Notonecta glauca, Lin., Faun. Sv. 244, 903, Sahl., Not. Faun. et. Fl. Fenn., Forh., XIV, 273, 1. *N. fabricii*, Fieb., Eur. Hem. 101, 2. *N. marmorea*, Fab., Syst. Rhyn., p. 103, 3 (1803).

Hab.—Yárkand.

Europa tota, Asia et America borealis, N. W. Siberia (Sahlberg); Algeria (Lucas).

41. *ENITHARES*, sp. ?

Allied to *E. indica*, Fab., if not a variety of that species.

Hab.—Jhelam Valley.

Family—*CORISIDÆ*, Fieb.

42. *CORISA HIEROGLYPHICA*, L. Duf.

Corixa hieroglyphica, L. Duf., Hem., 86, 2, fig. 85, 87. *Corisa hieroglyphica*, Fieb., Eur. Hem., 93, 15 (1861).

Hab.—Yárkand.

Palæarctic form. Astracan (Jacovlev).

43. *CORISA GEOFFROYI*, Leach.

Corixa geoffroyi, Leach, Class. Lin. Tr., 12, 7. *Corisa geoffroyi*, Fieb., Eur. Hem., 91, 6 (1861) = *dentipes*, Thom. (Sahlberg).

Hab.—Yárkand.

Astracan (Jacovlev); Algeria (Lucas).

HEMIPTERA-HOMOPTERA.

Family—*CERCOPIDÆ*.Sub-family—*CERCOPINÆ* (*CERCOPINA*) Stål.44. *COSMOSCARTA DORSIMACULA*, Walk.*Cercopis dorsimacula*, Walk., List. Homop. Ins. III, p. 658, 31 (1851).*Hab.*—Jhelam Valley.

N. Bengal, N. India, Cachar (Types, Brit. Mus.)

Sub-family—*APHROPHORINÆ* (*APHROPHORINA*) Stål.45. *PTYELUS COSTALIS*, Walk.*Ptyelus costalis*, Walk., List. Homop. Ins. III, p. 707, 13 (1851). *Ptyelus concolor*, Walk., *ib.*, p. 715, 26. Stål, Ofv. vet. Ak. Forh., 1862, p. 493.*Hab.*—Dras, Kargil, and Leh, August to September 1873.

N. India (Types, Brit. Mus.).

46. *CLOVIA NEBULOSA*, Fab.*Cercopis nebulosa*, Fab., Ent. Syst., IV, 50, 14; Syst. Rhyn., 94, 3. *Ptyelus quadridens*, Walk., List. Homop. Ins. III, p. 711, 19 (1851). *Ptyelus guttifer*, Walk., *ibid.*, p. 712, 21. *Clovia nebulosa*, Stål, Hem. Fab., 2, p. 16, 1869; Sign., Rev. and Mag. Zool., 1853, tom. 5, p. 183. Stål, Ofv. vet. Ak. Forh., 1862, p. 493.*Hab.*—Sind Valley, August 1873.Family—*JASSIDÆ*.Sub-family—*CENTROTINÆ*.

In his Hem. Af. 4, pp. 82-83 (1866), the late Dr. Stål. gave a "*Conspectus subfamili-
arum*" of his family "*Jassida*." In that work he placed the genus *Oxyrhachis*, Germ., in
his sub-fam. "*Membracida*," owing no doubt to the dilated fore tibiæ of the insects com-
prised in that genus. Subsequently, however, Ofv. vet. Ak. Forh., 1869, p. 280, he placed it
in his sub-fam. "*Centrotida*," adding "*Conspectus generum, centrotidum mundi antiqui—
vide Hem. Af., IV, pp. 86-89.*" Although there is an error in this statement, the genus
Oxyrhachis clearly belongs to the *Centrotidæ*, in which I have placed it.

47. *OXYRHACHIS*, sp.*Hab.*—Jhelam Valley. One spirit-specimen too much damaged to be described.

Sub-family—*PROCONIINÆ* (*PROCONIINA*) Stål.

48. *EUACANTHUS EXTREMUS*, Walk.

Tettigonia extrema, Walk., List. Homop. Ins., III, p. 761 (1851). Sign., Ann. Ent. Fr. Ser. 3, 1, p. 663, pl. 21, fig. 4 (1853). Stål, Ofv. vet. Ak. Forh., 1862, p. 495.

Hab.—Murree.

The type was from N. India.

Sub-family—*JASSINÆ* (*JASSINA*) Stål.

50. *BYTHOSCOPIUS STRAMINEUS*, Walk.

Acocephalus stramineus, Walk., List. Homop. Ins., III, p. 847 (1851).

Bythoscopus indicatus, Walk., List. Homop. Ins. Suppl., p. 266, 1858. Stål, Ofv. vet. Åk. Forh., 1862, p. 494.

Hab.—Sind Valley, August 1873.

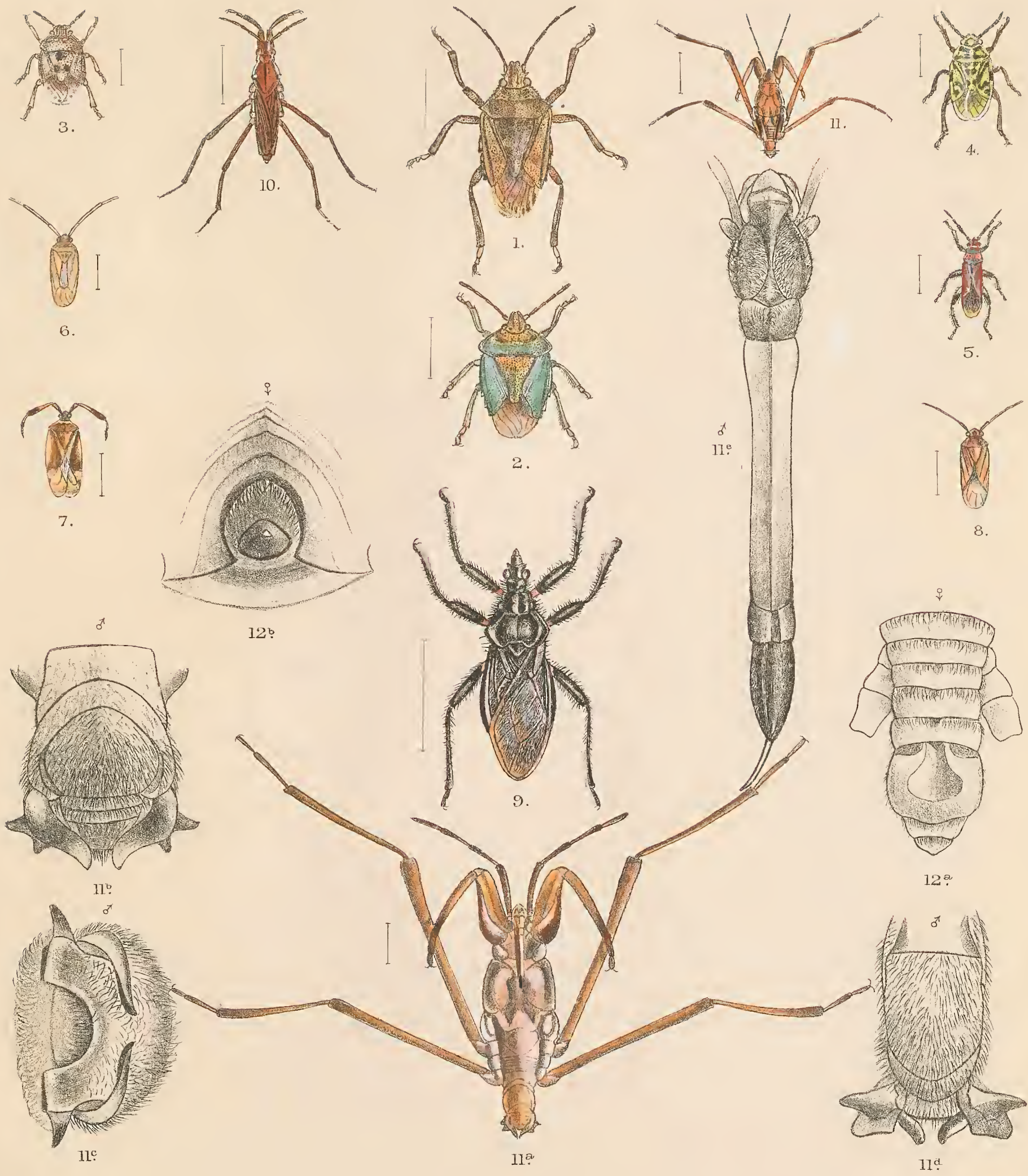
The types were from Java, N. China, and Celebes ; it is, however, a commonly received Indian species.

The remaining specimens of *Homoptera* contained in the collection, mostly somewhat minute species, are so damaged by immersion in spirit as to be undeterminable and of little value as museum-specimens. I should certainly pause before describing insects in this condition, as colour is obliterated and good figures could not be made. There are two small species of *Ricania* and one of *Nephesa* ; the rest call for little comment.

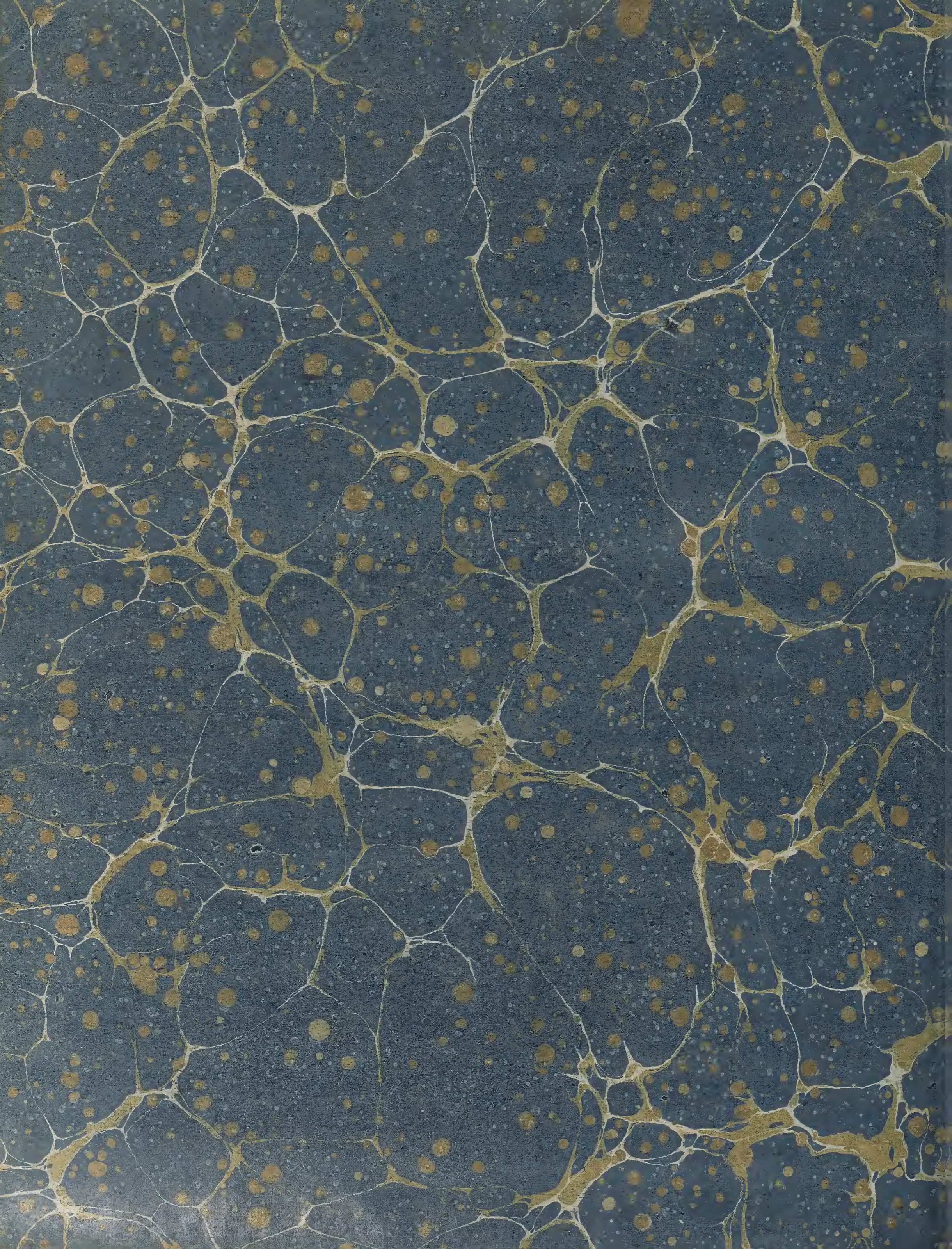
Explanation of the Plate.

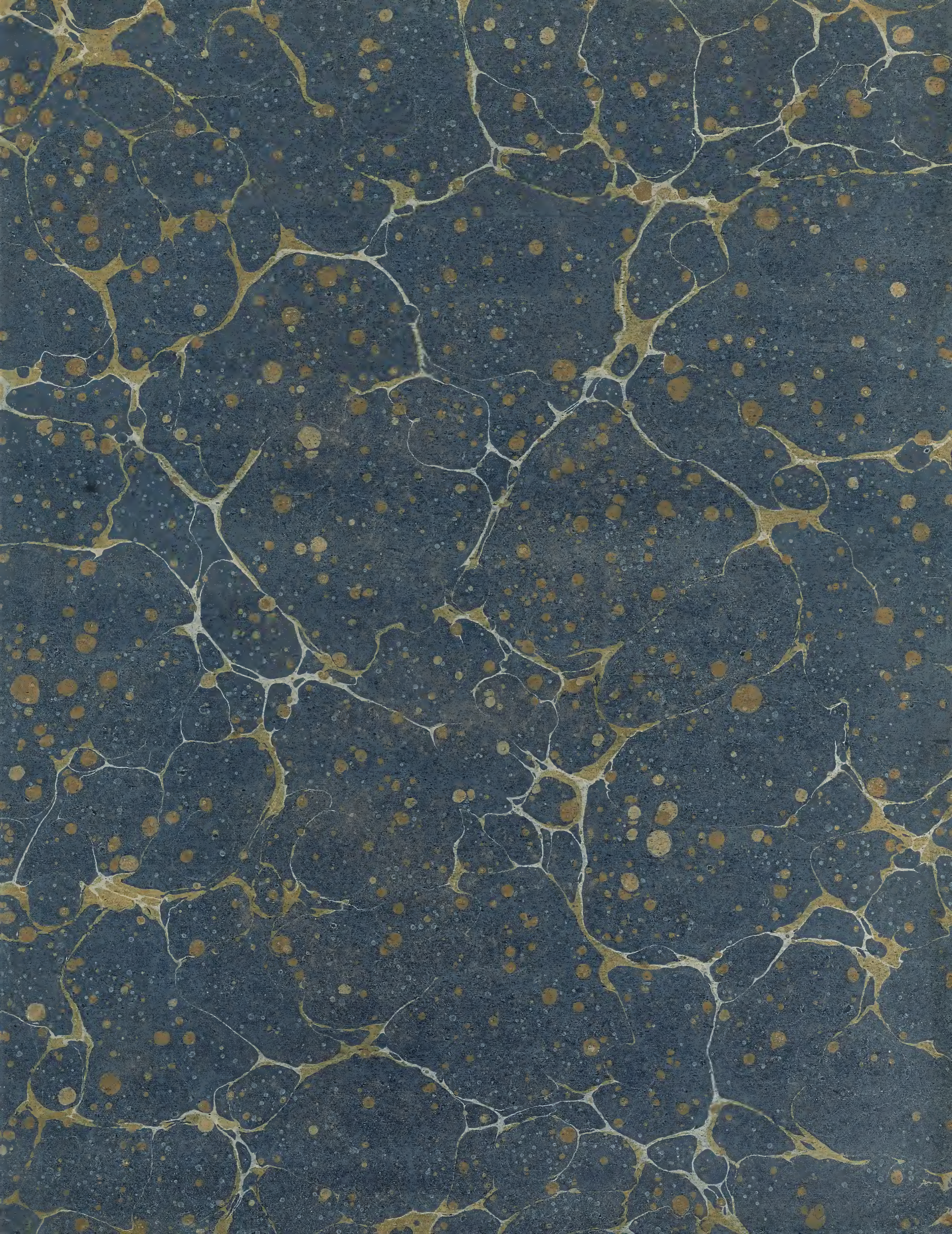
- Fig. 1. *Dalpada confusa*, Dist., p. 3.
- „ 2. *Palomena reuteri*, Dist., p. 4.
- „ 3. *Menida distincta*, Dist., p. 6.
- „ 4. *Eurydema wilkinsi*, Dist., p. 5.
- „ 5. *Arocatus pilosulus*, Dist., p. 9.
- „ 6. *Phytocoris stoliczakanus*, Dist., p. 9.
- „ 7. *Calocoris stoliczakanus*, Dist., p. 10.
- „ 8. ——— *forsythi*, Dist., p. 10.
- „ 9. *Reduvius* (*Harpiscus*) *reuteri*, Dist., p. 11.
- „ 10. *Gerris* (*Limnotrechus*) *sahlbergi*, Dist., p. 12.
- „ 11. *Halobates?* *orientalis*, ♂, viewed from above, enlarged, p. 12.
- „ 11a. The same, from below, more highly magnified.
- „ 11b. The anal appendages of the same, from above.
- „ 11c. The same, from below.
- „ 11d. The same seen vertically.
- „ 11e. The rostrum.
- „ 12a. & 12b. The anal appendages of the female.

HEMIPTERA.



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